

10-31-00

A

UNITED STATES PATENT APPLICATION TRANSMITTAL FORM

**BOX PATENT APPLICATION
ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231**

Docket No.: 833.0168USU

jc926 U.S. PRO
09/702036
10/30/00

Sir:

Transmitted herewith for filing is the patent application of

Inventor(s): Paul Andrew Abraham, John David Almstead, Jr. and Richard Neil Tobin

For: HAIR CLIPPER WITH PIVOTING CLIPER HEAD ASSEMBLY

Enclosed are:

XXX Specification (14 pps.) consisting of: Description (7 pps); Claims (6 pps); Abstract (1pp);

XXX 2 sheets of drawing;

 Declaration and Power of Attorney;

 An assignment of the invention to: _____, including \$40.00 recordation fee and Assignment Recordation Form Cover Sheet;

 Verified Statement (Declaration Claiming Small Entity Status - Small Business Concern);

 Information Disclosure Statement (with copies of patent);

 Form - PTO-1449;

 Preliminary Amendment.

The Filing Fee is calculated below.

CLAIMS AS FILED				
(1) For	(2) Number Filed	(3) Number Extra	(4) Rate	(5) Basic Fee \$690.00
Total Claims	20 - 20 =	0	x \$18.00	\$0
Independent Claims	3 - 3 =	0	x \$78.00	\$0
Multiple Dependent Claim Fee			x \$260.00 = \$0.00	
TOTAL FILING FEE				\$690.00
1/2 FILING FEE FOR SMALL ENTITY				\$

XXX No fee enclosed – filing by missing parts.

A check in the amount of \$____ to cover the filing fee is enclosed.

The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §§1.16 and 1.17 which may be required with this communication or during the entire pendency of the application, or credit any overpayment, to **Deposit Account No. 01-0467**. A duplicate copy of this Form is enclosed.

Address all future communications to: **Charles N.J. Ruggiero, Esq.**
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.
One Landmark Square, 9th Floor
Stamford, Connecticut 06901-2682
U.S.A.

October 30, 2000

Date of Signature



Charles N.J. Ruggiero, Esq.
Attorney for Applicant(s)
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.
Registration No. 28,468
(203) 327-4500

CERTIFICATE OF EXPRESS MAILING

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" Certificate No. **EL648486061US**, service under 37 CFR §1.10 and is addressed to: Box Patent Application, Assistant Commissioner for Patents, Washington, D.C. 20231 on October 30, 2000.

Charles N.J. Ruggiero
(Typed name of person mailing paper)



(Signature of person mailing paper)

HAIR CLIPPER WITH PIVOTING CLIPPER HEAD ASSEMBLY**BACKGROUND OF THE INVENTION****5 1. Field of the Invention**

The present invention relates to hair clippers. More particularly the present invention relates to a hair clipper having a pivoting clipper head assembly.

10

2. Description of the Prior Art

Electric hair clippers having a stationary blade and a reciprocating blade are known in the art. The stationary blade and the reciprocating blade each have a plurality of teeth along the leading edge of the blades. The blades are mounted to the clipper such that the teeth of the stationary blade are substantially parallel to the teeth of the reciprocating blade. In this manner, reciprocating the reciprocating blade with respect to the stationary blade trims hair positioned between the teeth.

Since the leading edge of the blades present the teeth to the cutting surface, the person using the clipper must move the 25 clipper to various angles to position the leading edge of the blades parallel with respect to the cutting surface. Thus, it is desirable to provide a hair trimmer that permits adjustment of the blades with respect to the handle to better enable the user to position the blades parallel with respect to the cutting 30 surface.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a clipper having a clipper head assembly that is pivotable about an axis of rotation that is perpendicular to the handle and parallel to the cutting edge of the clipper head.

The present invention is an improved hair clipper having a pivoting clipper head assembly. The hair clipper includes a clipper head including a stationary blade having teeth and a reciprocating blade having teeth in which the teeth of the stationary blade are substantially parallel to the teeth of the reciprocating blade forming a cutting edge. The hair clipper also includes a handle having a longitudinal axis and means for reciprocating the reciprocating blade such that hair positioned within the teeth of the stationary blade are cut by the teeth of the reciprocating blade. Connectors connect the clipper head and the handle such that the clipper head pivots about an axis of rotation that is perpendicular to the longitudinal axis of the handle and parallel to the cutting edge.

In one embodiment, the improved hair clipper has a handle with a pair of legs. Each leg has a connector disposed thereon. The clipper head has pivot points positioned on opposite sides of the head. The connectors are adapted to pivotally secure the pivot points such that the clipper head is pivotable about an axis of rotation that is perpendicular to the longitudinal axis of the handle and parallel to the cutting edge of the clipper head.

DESCRIPTION OF THE FIGURES

Fig. 1 is a top view of the clipper of the present
5 invention;

Fig. 2 is a bottom view of the clipper of Fig. 1;

10 Fig. 3 is an exploded bottom view of a preferred embodiment
of the clipper of Fig. 1;

15 Fig. 4 is a first side view of an alternative embodiment of
the clipper of the present invention showing the clipper head in
its first position;

20 Fig. 5 is the first side view of the clipper of Fig. 4
showing the clipper head in its second position;

25 Fig. 6 is the first side view of the clipper of Fig. 4
showing the clipper head in its third position;

Fig. 7 is the first side view of the clipper of Fig. 4
showing the clipper head in its fourth position; and

Fig. 8 is the first side view of the clipper of Fig. 4
showing the clipper head in its fifth position.

DETAIL DESCRIPTION OF THE INVENTION

Referring to the figures and particularly to Fig. 1, a clipper, generally represented by reference numeral 10, is shown. Clipper 10 has a handle portion 20 and a clipper head assembly 50.

5

In a first embodiment of clipper 10, shown in Fig. 1., the clipper is a rechargeable clipper. In this embodiment, handle 20 houses a motor 30 and a battery 35.

10

Shown in Fig. 2, handle 20 includes an on-off switch 22, a plug 24, and a recharging indicator 26. Switch 22 has an on position and an off position. Motor 30 is operatively coupled to battery 35 when switch 22 is in the on position. Battery 35 is operatively coupled to plug 24 and recharging indicator 26 when switch 22 is in the off position. In operation, when switch 22 is placed in the on position, power flows from battery 35 to motor 30. Further, when switch 22 is in the off position, battery 35 is operatively coupled to plug 24 and recharging indicator 26 such that the plug 24 when coupled to a standard household electrical outlet delivers power to recharge the battery and to operate recharging indicator 26. Indicator 26 has a first state when battery 35 is recharging and a second state when the battery is fully recharged.

20

25 In this embodiment shown in Fig. 2, indicator 26 is a light emitting diode or LED 27. LED 27 has a first on or illuminated state and a second off state. In use, LED 27 is illuminated when battery 35 is recharging and the LED is off when the battery is fully recharged.

30

In an alternative embodiment of clipper 10 (not shown), the clipper is not rechargeable. In this alternative embodiment, handle 20 houses motor 30 operatively coupled to plug 24 when switch 22 is in the on position. In operation, switch 22 is 5 placed in the on position to cause power to flow to motor 30 from a standard household electrical outlet coupled to a power cord, not shown, which is coupled to plug 24.

Referring again to Fig. 2, clipper head 50, similar to 10 prior art clippers, includes stationary blade 55 and reciprocating blade 57. Blade 55 and blade 57 each have a plurality of teeth 60 along the leading edge of the blades. Blade 55 and blade 57 are mounted to head 50 such that teeth 60 of blade 55 are substantially parallel to teeth 60 of blade 57 15 forming a cutting edge 61. Motor 30 is operative coupled to reciprocating blade 57 to reciprocate blade 57 back and forth perpendicular to the longitudinal axis of handle 20. Thus, hair placed within teeth 60 is trimmed as blade 57 reciprocates with respect to blade 55.

20

Head 50 is mounted to handle 20 so as to permit the head to pivot about an axis or rotation A. Axis of rotation A is perpendicular to the longitudinal axis of the handle and is parallel to the cutting edge 61. Preferably, axis A is offset 25 from cutting edge 61 in the direction of handle 20. Head 50 is mounted to handle 20 so as to permit motor 30 to reciprocate blade 57 as the head pivots about axis of rotation A. Thus, clipper 10 enables the user to easily position cutting edge 61 parallel to the cutting surface.

30

In the preferred embodiment shown in Fig. 3, handle 20 defines a pair of support legs 40. Preferably, handle 20 is forked. Each leg 40 has a connector 42 positioned along axis of rotation A. Head 50 has a pivot point 59 positioned on opposite sides of the head also positioned along axis of rotation A. Connectors 42 are adapted to secure pivotally pivot points 59 of head 50 to handle 20. Thus, connectors 42 and pivot points 59 are adapted to enable clipper head 50 to pivot about axis of rotation A.

10

15

20

25

30

35

40

45

50

55

60

65

70

75

80

85

90

95

100

105

110

115

120

125

130

135

140

145

150

155

160

165

170

175

180

185

190

195

200

205

210

215

220

225

230

235

240

245

250

255

260

265

270

275

280

285

290

295

300

305

310

315

320

325

330

335

340

345

350

355

360

365

370

375

380

385

390

395

400

405

410

415

420

425

430

435

440

445

450

455

460

465

470

475

480

485

490

495

500

505

510

515

520

525

530

535

540

545

550

555

560

565

570

575

580

585

590

595

600

605

610

615

620

625

630

635

640

645

650

655

660

665

670

675

680

685

690

695

700

705

710

715

720

725

730

735

740

745

750

755

760

765

770

775

780

785

790

795

800

805

810

815

820

825

830

835

840

845

850

855

860

865

870

875

880

885

890

895

900

905

910

915

920

925

930

935

940

945

950

955

960

965

970

975

980

985

990

995

1000

1005

1010

1015

1020

1025

1030

1035

1040

1045

1050

1055

1060

1065

1070

1075

1080

1085

1090

1095

1100

1105

1110

1115

1120

1125

1130

1135

1140

1145

1150

1155

1160

1165

1170

1175

1180

1185

1190

1195

1200

1205

1210

1215

1220

1225

1230

1235

1240

1245

1250

1255

1260

1265

1270

1275

1280

1285

1290

1295

1300

1305

1310

1315

1320

1325

1330

1335

1340

1345

1350

1355

1360

1365

1370

1375

1380

1385

1390

1395

1400

1405

1410

1415

1420

1425

1430

1435

1440

1445

1450

1455

1460

1465

1470

1475

1480

1485

1490

1495

1500

1505

1510

1515

1520

1525

1530

1535

1540

1545

1550

1555

1560

1565

1570

1575

1580

1585

1590

1595

1600

1605

1610

1615

1620

1625

1630

1635

1640

1645

1650

1655

1660

1665

1670

1675

1680

1685

1690

1695

1700

1705

1710

1715

1720

1725

1730

1735

1740

1745

alternatives and modifications can be devised by those skilled in the art without departing from the invention. Accordingly, the present invention is intended to embrace all such alternatives, modifications and variances which fall within the 5 scope of the appended claims.

WHAT IS CLAIMED IS

1. An improved hair clipper comprising:

5 a clipper head including a stationary blade having teeth and a reciprocating blade having teeth, wherein the teeth of the stationary blade are substantially parallel to the teeth of the reciprocating blade forming a cutting edge;

10 a handle having a longitudinal axis and means for reciprocating the reciprocating blade such that hair positioned within the teeth of the stationary blade are cut by the teeth of the reciprocating blade; and

15 means for connecting the clipper head and the handle such that the clipper head pivots about an axis of rotation that is perpendicular to the longitudinal axis of the handle and parallel to the cutting edge.

20 2. The hair clipper of claim 1, wherein the connecting means comprises:

25 at least one leg disposed on the handle and offset from the longitudinal axis of the handle;

a first connector disposed on the at least one leg; and

a second connector positioned on the clipper head,

wherein the first and second connectors join the clipper head to the leg of the handle such that the clipper head pivots about the axis of rotation.

5 3. The hair clipper of claim 1, wherein the connecting means is adapted to join the clipper head and the handle such that the clipper head is securable in any one of a plurality of preset pivoted positions.

10 4. The hair clipper of claim 3, wherein the connecting means comprises:

15 at least one leg disposed on the handle and offset from the longitudinal axis of the handle;

20 a first connector disposed on the at least one leg; and

25 a second connector positioned on the clipper head,

30 wherein the first and second connectors join the clipper head to the leg of the handle such that the clipper head pivots about the axis of rotation and such that the clipper head is securable in any one of the plurality of pivoted positions.

35 5. The hair clipper of claim 4, wherein the first connector is a first gear, the second connector is a second gear, and the connecting means includes means for meshing and unmeshing the first gear and the second gear, such that when the first gear is meshed with the second gear the clipper head is secured in any one of the plurality of pivoted positions, and

when the first gear is unmeshed from the second gear the clipper head is pivotable about the axis of rotation.

6. The hair clipper of claim 5, wherein the means for
5 meshing and unmeshing comprises a release button adapted to mesh
the first gear with the second gear and adapted to be depressed
to unmesh the first gear from the second gear.

10 7. The hair clipper of claim 1, wherein the reciprocating
means comprises a motor.

15 8. The hair clipper of claim 7, wherein the handle
further comprises:

a switch having an on position and an off position, and

15 a cord with a plug,

20 wherein the motor is operatively coupled to the cord when
the switch is in the on position such that power flows to the
motor from a standard household electrical outlet that receives
the plug.

25 9. The hair clipper of claim 7, further comprising a
rechargeable battery operatively coupled to the motor.

10. The hair clipper of claim 9, wherein the handle
further comprises:

a switch having an on position and an off position, and

30 a plug,

wherein the motor is operatively coupled to the battery when the switch is in the on position such that power flows from the battery to the motor.

5 11. The hair clipper of claim 10, wherein the handle further comprises:

10 a recharging indicator and wherein the battery is operatively coupled to the plug and the recharging indicator such that when the switch is in the off position power flows from a standard household electrical outlet that receives the plug to deliver power to recharge the battery and to operate the recharging indicator.

15 12. The hair clipper of claim 11, wherein the recharging indicator has a first state indicative of the battery recharging and a second state indicative of the battery fully recharged.

20 13. The hair clipper of claim 11, wherein the recharging indicator comprises an LED, said LED is illuminated when the battery is recharging and is not illuminated when the battery is fully recharged.

14. A hair clipper comprising:

25 a clipper head including pivot points positioned on opposite sides of the head, a stationary blade having teeth and a reciprocating blade having teeth, wherein the teeth of the stationary blade are substantially parallel to the teeth of the reciprocating blade forming a cutting edge; and

30 a handle having a longitudinal axis, a pair of legs, a connector disposed on each leg, and means for reciprocating the

reciprocating blade such that hair positioned within the teeth of the stationary blade are cut by the teeth of the reciprocating blade,

5 wherein each connector is adapted to engage one of the pivot points such that the clipper head is pivotable about an axis of rotation perpendicular to the longitudinal axis of the handle and parallel to the cutting edge.

10 15. The hair clipper of claim 14, wherein the connectors and the pivot points are adapted to join the clipper head and the handle such that the clipper head is securable in any one of a plurality of preset pivoted positions.

15 20. 16. The hair clipper of claim 15, further comprising a means for selectively releasing and securing the connectors and the pivot points such that when the connectors and pivot points are secured the clipper head is secured in any one of the plurality of pivoted positions, and when the connectors and pivot points are released the clipper head is pivotable about the axis of rotation.

25 30. 17. The hair clipper of claim 16, wherein the connectors are first gears, the pivot points are second gears, and the releasing and securing means is adapted to release and secure the first gears with the second gears, respectively, such that when the first gears are secured with the second gears the clipper head is secured in any one of the plurality of pivoted positions, and when the first gears are released from the second gears the clipper head is pivotable about the axis of rotation.

18. The hair clipper of claim 16, wherein the releasing and securing means comprises a release button adapted to normally secure the connectors and the pivot points, and adapted to be depressed to release the connectors and the pivot points.

5

19. An electric hair clipper comprising:

a clipper head including a stationary blade having teeth and a reciprocating blade having teeth, wherein the teeth of the stationary blade are substantially parallel to the teeth of the reciprocating blade forming a cutting edge;

10

a handle having a longitudinal axis, a motor for reciprocating the reciprocating blade such that hair positioned within cutting edge are cut; and

15

means for joining disposed on the clipper head and the handle for joining the clipper head to the handle such that the clipper head pivots about an axis of rotation that is perpendicular to the longitudinal axis of the handle, parallel to the cutting edge and offset from the cutting edge towards the handle.

20

20. The electric hair clipper of claim 19, wherein the means for joining is further adapted to join the clipper head and the handle such that the clipper head is securable in any one of a plurality of preset pivoted positions.

25

ABSTRACT OF THE DISCLOSURE

A hair clipper having a pivoting clipper head is provided.

5 The hair clipper has a clipper head, a handle and connectors for connecting the handle and the head. The clipper head includes a stationary blade having teeth and a reciprocating blade having teeth, wherein the teeth of the stationary blade are substantially parallel to the teeth of the reciprocating blade forming a cutting edge. The handle includes longitudinal axis and a motor for reciprocating the blades such that hair positioned within the teeth of the stationary blade are cut by the teeth of the reciprocating blade. The connectors the clipper head and the handle such that the clipper head pivots about an axis of rotation that is perpendicular to the longitudinal axis of the handle and parallel to the cutting edge.

10

15

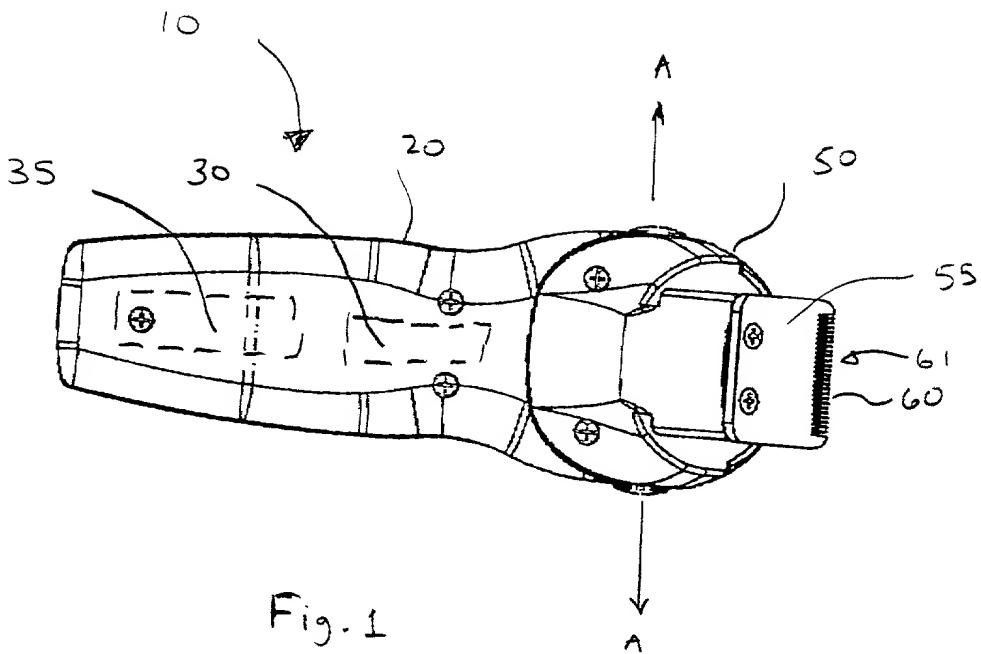


Fig. 1

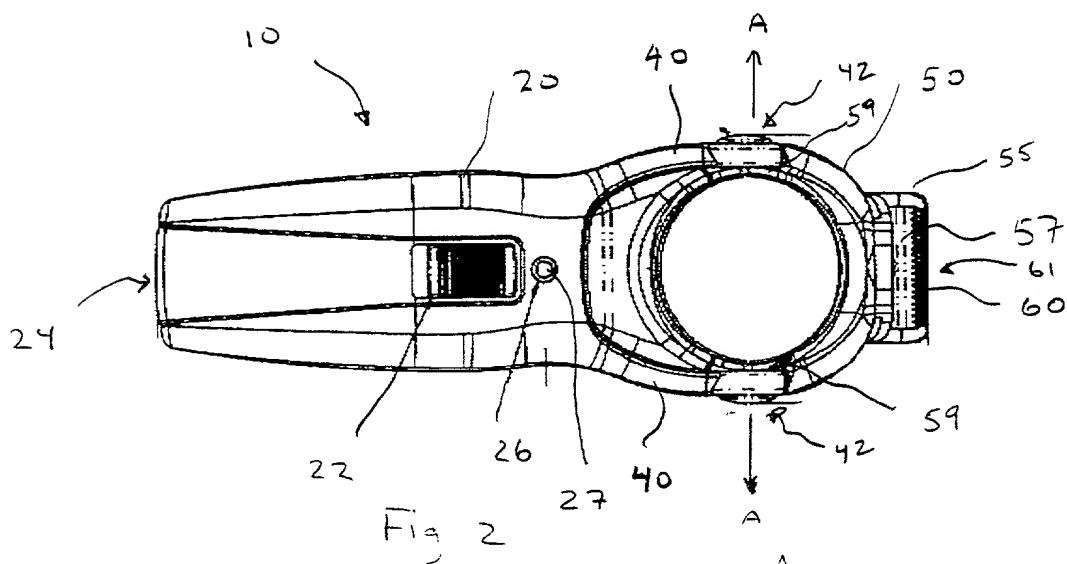


Fig. 2

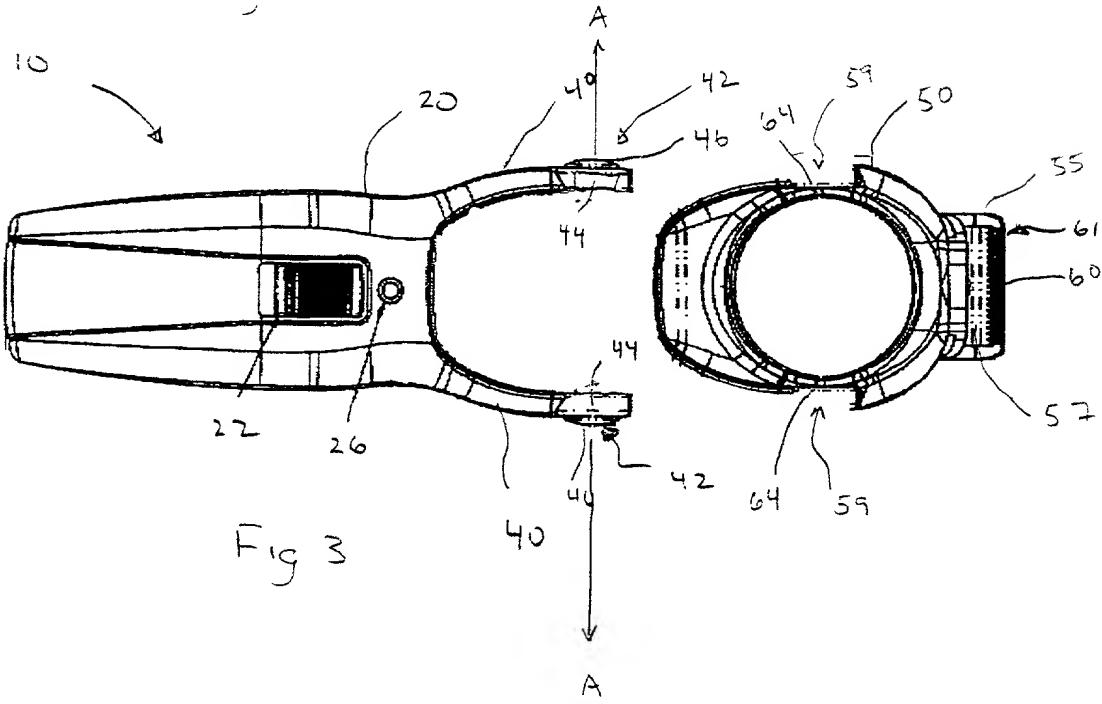


Fig. 3

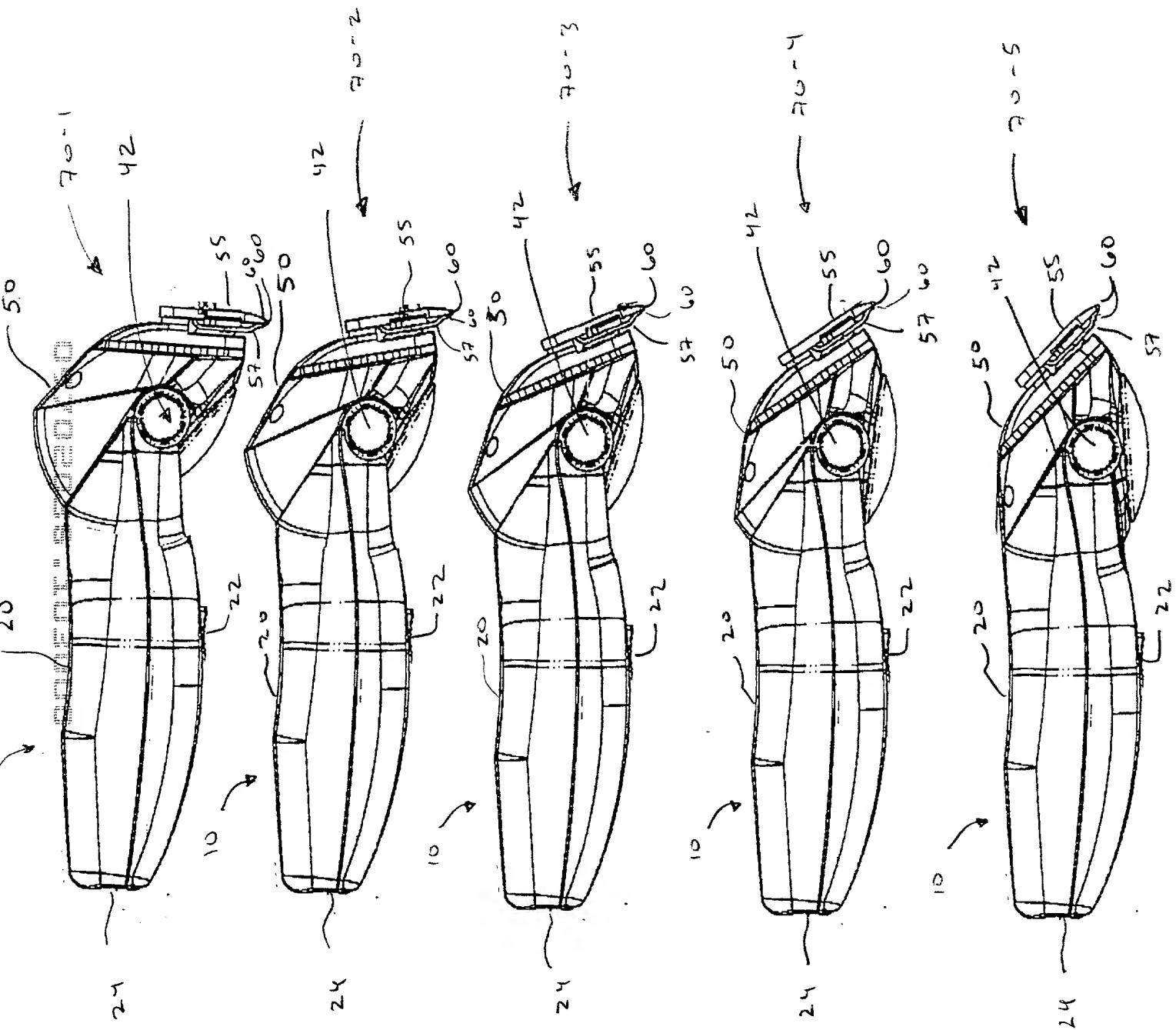


Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8